



Thesis. for

Degree of M. D.

*Observations on the high
Mortality of Glasgow*

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The subject which I have selected for the present thesis

Some of the Causes of the high rate of Mortality amongst the Poor of Glasgow

is one which has been suggested to me by my special connection with Medical Mission work in this city, especially during the past two years since obtaining my degree of M. B. from this venerable University.

In choosing this theme upon the present occasion of seeking a still higher Medical honour from your Court, I have done so, not from any expectation of contributing anything new or original to a subject which has long engaged the attention of abler and more experienced men, but because it is a subject of much interest at the present time, and upon which I can best speak from personal experience.

This is emphatically the age of great cities, their rapid extension in number and population being one

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of the main characteristics of our day, and there perhaps no more striking instance of this fact than in the history of our own city of Glasgow, which has within the life time of its citizens become the second city in the Empire. Although towns have ever been centres of civil and religious liberty, the abodes of science and commerce, the seats of civilization and of wealth, still they have numerous disadvantages, and their ^{rapid} growth in numbers cannot be regarded as an unmixed good. The aggregation of masses of people within a limited area has always been found, and especially in later times, to increase disease and death as well as to intensify poverty, vice and crime. While their sins and sorrows have engaged the attention of the Christian philanthropist, their diseases and mortality have equally engaged the attention of the physician, and medical knowledge has never been better employed than in advising the legislator how best to frame those regulations

which tend to obviate preventable disease and thus promote the health and comfort of the inhabitants.

Prevention it is said is better than cure, since curative measures are only partially and at times quite successful, but preventative measures are of more universal application and of greater efficacy. The services therefore rendered to the community by sanitary measures, must be regarded as important as the more striking remedies of surgery or of medicine. It is no doubt a noble task to cure disease, to rescue the sufferer from an impending death or smooth the passage to the tomb; but is it not still wiser and better to use such means as will prevent much of that suffering disease and death, and thereby prolong human life and ~~suffering~~ happiness. Since a large proportion of disease in our large towns arises from preventable causes, such as over-crowding, imperfect drainage, bad water supply and the like, instead of merely dealing with such disease when it appears, it is surely more wise to deal with its source

and as far as lies in our power, so to improve the sanitary surroundings of our poor as well to some extent lessen suffering and death.

The repression of disease should therefore receive as much attention from our Law-makers as the repression of crime, ^{since} the public health is as valuable as the public wealth. Sickness amongst the poor not only deprives the state of useful labour but also imposes a burden upon it for support during ill health. The appointment therefore of a staff of sanitary police or Inspectors, Health officers, medical aid for the sick poor, hospitals &c are not only dictated by benevolence but also by economy. The vast accumulation of evils from past neglect, the vested interests of rapacious landlords, together with the degraded state of our lower classes will however require long and continued effort to overcome, and will render success partial and imperfect.

The poor we have always with us, and the tendency of our

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times, though the improvement of machinery lessening the demand and remuneration of unskilled labour, is to increase their number. In this country and especially in this city, poverty is invariably associated with overcrowding, drunkenness, idleness and premature death, & there is the utmost need of enlightened public legislation as well as individual endeavour to remove or mitigate some of the more flagrant reproaches to our existing civilization.

Hygiene is now beginning to occupy a more prominent place in public attention and its claims are now recognised by the highest authorities in the state.

Earl Beaconsfield, the Lord Rector of this University, and Prime Minister of England, upon a recent occasion, modifying the utterances of a wisecracker exclaimed "Sanctus sanitatum omnia Sanctus" and declared the chief policy of his Government to be that of the public health. The following is an extract from his memorable address "I think public attention

" ought to be concentrated upon Sanitary
 " legislation; I cannot impress upon you
 " too strongly my conviction of the im-
 " portance of the Legislature and society
 " uniting together in favour of these
 " important results, for after all
 " the first consideration of a Minister
 " ought to be the health of the people."

It is unfortunate that the exigencies of
 politics have hitherto prevented the
 fulfilment of these promises, and that
 there is little hope even now of their
 speedy realization. All sanitarians
 must regret that a portion of that
 time and strength expended in Parlia-
 ment in conferring an empty title
 upon our beloved Queen, or in grant-
 ing longer hours to the publicans
 for the sale of their liquors, had
 not been devoted in conferring upon
 the people authority to remove ack-
 nowledged nuisances and in enabling
 the public to secure purer air and
 better homes.

At present the great struggle
 between two mighty powers of Europe
 so absorbs the attention of our people

that the great struggle between the two great powers of health and disease in our own towns is quite unheeded. The great loss of life abroad in open warfare causes the almost equal loss of life in our crowded lanes to be utterly disregarded.

We send men money clothing and medicine to aid foreign sufferers, while thousands in our own city suffer and die uncared for. True charity begins at home, and with the acknowledged facts of the great neglect of our sick poor, brought before us by Dr. Russell, our benevolence should meanwhile find scope in remedying home evils before seeking to rectify foreign wrongs.

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All statistics show that the rate of mortality is largely influenced by the density of the population, and that just in proportion that people are brought closely together, there disease and death are increased.

This is well brought out in the following figures showing the rate of mortality for every thousand of the population in Scotland

Principal towns	28.2	per 1000
Large towns	24.6	"
Small towns	22.1	"
Rural districts	17.3	"

Glasgow unfortunately possesses an unhappy pre-eminence in the death rate which until the past two years has been 30.4. In striking contrast to this, the death rate of London that huge metropolis with a population nearly equal to that of Scotland is only 22.4, nearly the same rate as that of the small towns of our country. This difference cannot be accounted for by the influence of a milder climate since the rural districts of Lanarkshire show a percentage of only 17.4.

Let us then seek to enquire into some of the causes of this increased mortality in our own city.

The first and the main cause of the high rate of disease and death in Glasgow, which we find to occur chiefly amongst the poor is doubtless that of

Overcrowded Dwellings.

In all the English towns, excluding the rural districts there are, we are told, 713 inhabited houses and 4061 inhabitants to the square mile. This would give nearly an acre to each house containing six persons, so that the area of each town must be far from being fully occupied. In marked contrast to this was the state of large parts of Glasgow before the passing of the City Improvement Act in 1866, and even now, matters are not greatly mended in many parts of the town. Instead of six persons to the acre as mentioned above being the average of towns in England, there were

districts with six hundred people to the acre, upwards of fifty (50) thousand people being huddled together upon eighty (80) acres. Even now with all the vast changes being made during the past few years in opening up such localities, and pulling down hundreds of these human rookeries, the average population in this city (excluding the Parks) is over 100 persons to the acre. London and even Edinburgh with its lands on the High Street, towering to a dozen stories in the murky atmosphere contain about 46 to the acre.

This great density of population and consequent overcrowding must therefore be reckoned as the most productive cause of increased disease and death, amongst our teeming thousands.

In looking over the mortality tables of this city compiled by Dr J. R. Russell its esteemed Medical Officer of Health we find the most marked difference in various districts, chiefly regulated by the comparative density of the people and their social position, and in

which it is shown that "the destruction of the poor is their poverty." He has divided the city into four sanitary groups, each of these groups with subdivisions of localities resembling each other in density and character of the population. Group I contains the better class portion of the inhabitants, and above 33 per cent of the houses have over three apartments. Group II contains nearly half of the total population, and form a ring round the city. Of the houses 31 per cent are one-apartments. The low density is deceptive since it includes within it, Glasgow Green and Alexandra Park.

Group III contains over 100,000 people of the lower classes, about 40 per cent of the houses being only one apartments.

Group IV contains the densest and worst districts of Glasgow both morally and physically. The operations of the Sanitation Committee were here, carried out, and the density has thereby been diminished 20 per cent, since 1871.

The following Table shows the comparative death rate in each of the groups as described above.

Groups	Persons to an acre	Death rate	
		All ages	Children under 5 years
I	69	20	160
II	⁶⁴ deceptive	28	231
III	235	31	256
IV	344	39	344
Whole city	89	30	243

In the twenty five statistical subdivisions which Dr Russell also tabulates, we have ~~also~~ the widest disparities in the death rate, generally corresponding as above to the density of population, varying from Blytheswood where it is about 15 to the Bridgegate & Wynydd - where it is nearly 50 to the thousand.

Looking again at the rental of the houses in Glasgow for 1846, as indicating the number of rooms they contain, and bearing in mind that the average rent of One apartment is from £4 to £6 according to size and locality, and the rent of two rooms usual runs from £8 to £10 or even more if in

a more airy and respectable locality.
 Rent of £4 and under 9,000

£4 to £10 65,000

£10 & above 36,000

Total inhabited houses 110,000

It is further calculated that 46 per cent of our population, that is nearly the one half of the people live in houses of one apartment piled in close proximity, flat above flat, in narrow streets where the air is loaded with smoke and polluted with the fumes of large manufactories.

Taking all these statistics together we find that the increased mortality in Glasgow nearly corresponds to the density of population; and thus both explaining the higher death rate above the English towns, and also in the various districts of the city itself.

Overcrowding, drunkenness, impurity of life, and want of medical aid are in my opinion the principal causes of this great loss of life.

It has been already mentioned the great proportion of ^{cases} ~~substantive~~ where whole families live in one roomed houses, and even in ^{dwellings} of two apartments, one of these is generally sublet to another family or to lodgers. This practice of huddling together both sexes and persons of all ages, where it is impossible the decencies of life can be duly observed is not only ruinous to health but also to modesty and virtue. It must thus be a most common thing for children of different years to sleep in the same bed or room with their elders, and even grown up ladies and young women occupy the same apartment with their parents.

Thus I have known cases in which a young woman slept in the same bed as her father, and another regularly to occupy the same room with a married sister and her husband.

Bad enough as this is, it is still worse when two families occupy the same room though poverty or where strangers as lodgers are

added to the other inmates.

The force of habit may no doubt tend to blunt the feelings, and inure the occupiers to their surroundings - so that perfect innocence of life may be maintained, still in most cases a deteriorating influence is exercised upon the mind which leads to further debasement and paves the way for future wrong doing.

In many parts of the Highlands and Western islands of Scotland, somewhat of the same state of things may exist in overcrowded small hovels, but there they enjoy a purer morality and a purer air. The fresh breezes blow around and often through their ill built cabins and their open air life preserves them from marked deterioration of health.

But the homes of our poor are for the most part built in narrow streets or lanes with the air fouled with smoke, dust, noxious gases and foul smells -

where from the faulty arrangement of the houses the healthful wind cannot penetrate and clear the fetid atmosphere. It is not necessary for me to give details which must be familiar to every intelligent citizen but in my visitations I have very frequently found the lands built around a central enclosed space occupied with middens and like receptacles for filth, emitting such odors, that the people, had as the air might be within their rooms, had carefully to close every crevice around the windows in order to exclude such contaminated air.

I have ^{met} even worse dwellings than these, both in Anderson and Cav-
caddens where my work chiefly lay, underground rooms, - old cellars which the great demand for houses caused by the operation of the City Improvement Act, and the greed of the owners of such properties had altered into receptacles for human beings. Some of these places were

dimly lighted with gratings, others had not even this convenience and were in darkness but for the scanty light of the fire or candle or open door. Such places which a respectable rat would refuse to inhabit, were the abodes of our fellow creatures. The floors and walls were necessarily damp and were little better than living graves, in which the young speedily perished.

One of these plague spots in Anderson was lately denounced by the Medical Officer of health from the excess of mortality, and only some few months ago public indignation was given that the law ~~prohibiting~~ ^{regulating} such habitations (which had hitherto been held in abeyance from the scarcity of houses for the poorer classes) would henceforth be more rigidly enforced.

It is not required of me to insist upon the value of fresh air, as a necessity of healthful existence. The comparison has often been made that air and light

are as necessary to the dwellers in cities as they are to trees and plants. In an overcrowded wood for example we see the central saplings weakened and dwarfed and often come to nothing. A few more robust may push aside the weaker and manage to survive, but are destitute of the sturdy strength of others grown in more open spaces.

So in a large town like Glasgow the many evil influences connected with overcrowding are specially destructive to infantile life and the mortality amongst them is a sort of barometric index of the sanitary condition of the neighbourhood.

Professor Gairdner for ten years Officer of health to the city thus expounds this fact "Given a community in which the infants die with extreme rapidity, and in which the general death rate is also high, you have in the fact of the high infantile mortality not only a corroborative proof of the defective sanitary conditions operating upon

the entire population, but you have also proof of defective sanitary conditions operating specially upon the young life, in all probability through the neglect or vice or ignorance of the parents."

In Glasgow one in every ten of the children under five years of age perish every year. During the past year (1876) whilst the rate per thousand of all ages was only 25.4, the rate for children under five years was 83.6. Of these deaths under five years of age three fourths were of infants under one year showing their great susceptibility to bad hygienic surroundings.

I need to think that this great loss of life amongst young children in overcrowded localities was like similar conditions amongst plants and animals, a provision of Nature in order to secure the good of the species, whereby in the struggle for existence the weaker members are thinned out, and those with more vitality spared.

In many cases however the survivors have the seeds of disease implanted in their constitution, which develop in after life into actual maladies, and furnish ample material for our dispensaries, hospitals, sea side homes and infirmaries. They form that class of "rotten potatoes" of which Professor Blackie talks rather grimly.

In dispensary work it is sad to see the number of children with scrofulous sores, enlarged glands, rickety bones, bandy legs, diseases of atrophy and the like to whom medicine is little else than a mockery, and fresh air, nourishing diet and careful nursing are forbidden by their straitened circumstances.

Insufficiency of food amongst the very poor, no doubt adds its share in producing disease and hastening death amongst that large class whose whole life is a hard struggle for very existence. Either through low wages, irregular work, bad health, death of bread-winners

or perhaps most frequently intemperate habits on the part of a husband and father, hundreds of families live on the brink of starvation.

While in my mission work among the poor I have seen much on the one hand of misconduct and drunkenness, of distress arising from wrong doing, of poverty self produced, of begging and impudence, on the other hand I have found many noble spirits fighting manfully with privation and disease, struggling hard with misfortunes, doing nobly in the battle of life without murmur and without complaint.

In these privations the women and children suffer most, and I have witnessed many cases in which want of the necessities of life and ill treatment of a drunken father had caused death in the household as certainly as if by direct violence. We have also poor needlewomen and seamstresses stitching themselves into their graves through over work and scanty fare.

The effects of insufficient food are generally so intimately associated with other causes of disease especially those of overcrowding, that it is impossible to estimate their separate influence on ^{the} public health with any accuracy. The fact that a scanty diet produces or tends to produce disease and increased mortality has been abundantly shown by experience. The great loss of life by the famine fever in Ireland, the terrible mortality of the British troops in the Crimean war, and of the Federal soldiers confined in Fort Sumter during the late American war together with the alarming sick rate which has ensued in prisons work houses and schools, all show the effects of an insufficient diet.

Here in Glasgow with a large section of our community living on the border line of pauperism, in addition to those already in receipt of parish relief which latter is often meagre and scanty, partial starvation must also be included as a cause of mortality.

Glasgow as the seat of several industries and manufactures, attracts to itself thousands of unskilled labourers, who are almost certain of procuring employment in some of its many occupations.

The changes in the rural districts of joining small farms into large ones, and in the highlands of clearing out the small cotters to make room for sheep or deer drives thousands of the country people into our large towns to compete with each other for the means of existence. The wages of such persons are indeed too little to allow those of them who are married and have families (as is the case with the most of them) to live in comfort or decency. The wages of labourers vary from fourteen shillings till twenty, sixteen or eighteen being the average. With the increased price of rent and provisions during the past few years, how these poor people manage to live, and also find money for whisky is a mystery which I have not yet been able to

solvers.

A large proportion of this class are Highlanders who have been cleared out of their native glens in thousands, but the greater part are from the sister island either also expelled from their little holdings or attracted by a comparative higher rate of wages. It is calculated that there are fully one hundred thousand of Irish in this city, most of whom are engaged in menial occupations.

Both of these classes of people and especially the latter being accustomed to rude dwellings, small rooms, neglect of personal cleanliness, and a low scale of comfort, are crowded together in our back lanes and our crowded tenements in a manner which certainly impairs both their health and their morals.

I have noticed many of this class who have come to Glasgow in mature life often do preserve their previous habits of industry and attendance upon their places of worship in spite of the

unfavourable nature of their surroundings. Such persons may lead comparative decent and respectable lives with the exception of an occasional outbreak on some festive occasion.

Their children however brought up in crowded rooms grow up with enfeebled frames and become only acquainted with lying cursing drinking obscenity and learn to copy such wretched behaviour whilst still unconscious of their true meaning. ^{It rapidly learn all evil practices} A single visit to the poorer localities is quite sufficient to attest these facts.

I have often pitied these little ones with few toys or amusements with no play ground but the crowded close or stair, no open space but the pavement and the street, hearing little that is good and much which is evil, trained up in the way they ought not to go, it is next to impossible that they grow up sober well behaved citizens.

These children living habitually in a tainted atmosphere, surrounded by dirt poverty and drunkenness

often inheriting from depraved parents
vicious propensities and diseased bodies,
growing up in ignorance and vice
constitute in after life those home
heathens - which are the blot on
our civilization and Christianity.

The City Improvement scheme
no doubt did good work in demol-
ishing many of the worst areas -
in Glasgow, where the population
was packed together at the rate of
six hundred or a thousand to the acre.

These were hotbeds of disease and
vice where the death rate often rose
as high as seventy (70) and where
immorality drunkenness and
disease were rampant.

The destruction of such old
houses was absolutely necessary,
but there ~~was~~^{was} an immense
number of ~~vulnerable~~ persons ~~who~~^{suddenly}
dispossessed of their old homes
without any adequate provision
made for them elsewhere.

Comparatively few landlords were
willing to have this class of people

deteriorating their properties and driving away a better class of tenants. There was therefore a general rise of rents all over the city, especially in the lower class tenements; and ^{poor} people unable to meet this extra expense were compelled to crowd still closer together and thus for a time, those evils were intensified which the Improvement Trust sought to diminish.

This rise in the value of such property induced speculative builders to erect buildings extensively often upon ground bought from the Trust itself, which in many cases were as dense and overcrowded as those which had been demolished. Unless a more stringent Building Act be obtained and rigidly enforced the next generation will have to purchase and erage as public nuisances the tenements which are being at present constructed.

These buildings are not only placed in too close proximity to each ^{other} with inadequate spaces

between for air and light, but are often constructed not for use, but to sell to some unwary purchaser. They are run up as quickly as possible of the cheapest materials (often belonging to the old houses pulled down by the Improvement operations) without good drainage with damp walls, leaky roof draughty windows and other discomforts which seriously affects the health of the inmates. To show the accuracy of this statement I quote from a report of a district inspector of the Health Department which appears in the Glasgow Herald of past week (20th June) and his remarks apply to many similar buildings.

"One of ^{the} new buildings in Bann Street is about the most disgraceful I have ever seen, there being no water, no water closet, no privy or ash pit accommodation, the woodwork being unfinished, the windows unhung and the plaster wet. The evil effects of transpiring a family in such a dwelling are seen in the family ^{most} ~~constitute~~ ^{constituted} by scurvy, rheumatic fever & especially in the case of the children. As the law now stands, the

tenants have no redress but by a cumbersome and lengthened law process."

Although these and other evils were redressed by parliamentary and municipal enactments, as long as the working classes spend so large a proportion of their earnings in strong drink, preventable disease and death will still abound. In Govan where I am at present resident, there are plenty of open spaces intersecting the burgh, and pleasant walks within reach on the summer evenings, still the inhabitants are notorious for their intemperance, and the death rate is as high as more crowded parts of the city.

Although the wages of the artisan may be large, and the sanitary conditions of the district may be satisfactory, if there be the love of strong drink, then all else will be sacrificed to this selfish indulgence and insufficient food, clothing and habitation will be the lot of the family if not actual illusage besides,

and the health of the family circle must thereby suffer. This great besetting sin of the working classes does more I believe to produce disease and hasten death than all other causes put together, and until there is a Temperance reformation all other sanitary improvements will be comparatively in vain. Drunkenness does indeed abound in English as well as Scottish towns but the stronger alcoholic character of the beverages drunk in this country tells more directly on the deterioration of the health.

Beer does contain some little nourishment but whisky none, and their respective effects upon those who freely use them are very different.

The greater mortality amongst the spirit drinkers is due to the greater potency of the liquid which they consume, and the ~~less~~ ^{more} alcoholic ~~promising~~ ^{this} together with the greater overcrowding in huge bands of houses may account for the ~~greater~~ ^{higher} mortality of Glasgow as contrasted with London.

There has been a marked diminution in the mortality of the city during the past two years and although part of this decrease is owing to the comparative mildness of the winter weather, great part must also be due to the efficiency of the arrangements now made for treating infectious diseases, and to the wider dispersion of our poorer classes into healthier districts.

The following are the total deaths for the whole city during the past five years

1842	14,354
1843	14,876
1844	16,323
1845	15,284
1846	13,690

The winter of 1844 was unusually severe so that the mortality was much greater than the average.

The marked decrease in 1846 was due to the much diminished fatality of zygomatic diseases and pulmonary affections.

The average percentage of the death rate to the thousand has also shown a gratifying decrease during the past two years especially during the one which has just closed.

In 1874 and the average of the ten preceding years it was 30 per cent.

In 1875 it was reduced to 28 per cent.

In 1876 it was further lessened to 25.4 being less than that of any preceding year.

It will be interesting to watch ~~to watch~~ the mortality returns for the next few years in order to ascertain what return of public health has been obtained for the vast sums spent in City Improvements, and if the present gain be temporary or permanent.

We will now examine a little more closely some of those causes which tell more powerfully upon the young life and tend to produce that terrible high rate amongst children which characterizes our city.

At the very outset early and unprovided marriages bring into existence thousands of helpless creatures for whose support no adequate provision has been made by their parents.

Prudence and forethought are unfortunately so much neglected by the poor, accustomed as they are to live from hand to mouth, without much concern for the future, that they contract marriages without consideration of the responsibilities thereby incurred. A man with a low wage who can earn little more than what is sufficient for his own wants will nevertheless run into matrimony regardless of the consequences.

From such unions result early and frequent offspring and although more than half these may be

swept off by disease in infancy still part will grow up to continue a race as poor and unhealthy as themselves. I have remonstrated with such persons as to the folly of this conduct, and the substance of their replies have been, - that they cannot be worse than they are at present, and they may be better. If children come they must just do as their neighbours, that God never sends mouths but he sends meat. If sickness comes or work fails or things get worse the parish is bound to support them and that somehow or other they and theirs will manage to scramble along as their parents have done before them.

The case of "Gurk's baby" as given by Mr. Jenkins M.P. is a type of too many in Glasgow and other large towns where the increase of the family is greater than the means of support, and every additional mouth is so much taken from the others.

The numbers are indeed kept down by defective sanitary arrangements, insufficient nourishment, wrong treatment and not infrequently intentional neglect amounting to culpable homicide.

The mismanagement of children begins with their earliest days. The poor seem to have an implicit trust in medicine and fancy that they or their children can eat or drink whatever they please and that a powder pill or draught can put all right. I need scarcely remind you of the story told by Dr Brown of Edinburgh of an Irish patient who swallowed the paper containing the prescription instead of the prescription itself and was thereby cured of his ailment. In the case of infants the first thing done after birth is to administer castor oil, salt butter and sugar, or some such compound.

If the bowels subsequently get wrong from ~~improper~~ ^{improper} food then castor oil, magnesia, mercurial powders, and

even Laudanum and whisky are freely given and the poor sufferers are often dosed out of existence. If any thing is wrong with the child instead of taking it to a dispensary, they take the advice of every ignorant neighbour and try the often opposite and hurtful proposed remedies, until frequently afterwards they call in a medical man when too late. I have thus frequently been consulted when the child was manifestly dying and even after it was dead.

Whatever else has been tried you are certain to find whisky has been freely used, which is believed by them to be a panacea for all the ills that flesh is heir to, an idea which the treatment of many practitioners of the past day has done much to encourage. The stimulant treatment of disease is too much in vogue with these poor people and the results are frequently disastrous to the patients.

Another cause of the increased mortality is wrong food. Instead of being confined to the breast for a few months of early life, the mother supposes it necessary to give the babe something more substantial than milk, and give bread boiled flour, broken biscuit with other farinaceous foods. This diet brings on wind, colic, disordered bowels &c and by otherwise impairing the health brings disease, and an untimely end. ^{Should they survive} A few months older, they get what is called "the run of the house" which means the ordinary fare of the parents, and this also tends to sickness and ailments of different kinds.

Another almost universal custom worse than the above is that of prolonging the period of nursing till the child is eighteen months or even two years of age.

The chief reason of this plan is to prevent too frequent maternity. The passions of their husbands are often so ill regulated that they do not refrain from their indulgence at the

times which are forbidden by nature, and this continued nursing is the only check which these women know in preventing conception.

As might be expected, this scheme does not always prove successful, and even then the mother and the child are equally weakened in health and predisposed towards disease.

The use of opiates for children is also a common practice which is very hurtful. The mothers have usually to attend to several children in addition to their household duties so that they can have little time or strength to spare for sickly infants. They thus frequently resort to the use of opiates to quiet fretful babes, and thus secure time for their house work, or repose at night. In the use of these they frequently act in ignorance of their deleterious nature. They read in the newspapers advertisements about soothing syrups and cordials which are declared to be perfectly safe

and buy them from the chemist who either through ignorance or love of gain, gives no hint as to the danger incurred.

Others both mothers and nurses use them habitually though ~~be~~ aware of the risk to the infant, being more careful of their own comfort than the life of the child.

I have reason to believe that even nurses among the better classes use these drugs in order ^{to} secure their nightly rest. I was lately informed of a surgeon of the Royal Infirmary whose baby was thus drugged by a wet nurse with a fatal result. The nurse long and stoutly denied the use of any opiates until too late when she reluctantly acknowledged that both this child and her own which had also shortly before died had been drugged with one of these baby-killers. The matter was allowed to drop as the evil had been done, and the doctor wished to avoid publicity.

Burial Societies

These societies though originated with a provident purpose have been the cause of more slaughter of the innocents ^{every year} than the soldiers of King Herod of notorious memory.

The poor both from their straitened circumstances, and from being accustomed to the frequent loss of their children by various diseases, regard the death of their little ones with less sorrow than others in a better social position. Their removal is often felt to be a relief to a toil worn mother with a large family, and by the father as one less drag upon his labour. When therefore a death is sometimes felt as the removal of a burden and still more can be rendered an occasion of gain, there arises a temptation to criminal neglect in time of sickness.

Very many cases of this kind have occurred in my own limited experience, and I have often refused to sign certificates of attendance

to those who have manifested culpable negligence. Mothers have brought children to my mission dispensaries very ill, and when sometimes they partially recovered much to their regret, they either delayed returning with them till their death was almost certain, or came to tell me that a child was dead whom I had seen three or four weeks before. In private practice I have also been called upon to see children a few hours before their death, who had been ailing for weeks, in order simply to secure a certificate of death. I have also known parents anxious enough about their own health allow their children to die with^{out} medical aid, not from poverty but sinful carelessness. In a recent case in which the child did not receive the attention it ought, the parents received in all from various Burial Societies the sum of Ten Pounds, a large amount to persons in their circumstances.

In 1846 out of a total death rate of 13,400 no fewer than 4900 were in Friendly Societies and of these 2000 were children under five years.

The attention of the Legislature has been called to the fact of the special mortality amongst the children insured in such societies and a limit placed to the sum granted for each child, and also ~~rendering necessary~~ ^{for the parents to produce} a medical certificate of attendance. This latter clause came into effect last year and in Glasgow alone reduced the numbers of uncertified deaths one third - from 3025 in 1875 to 2038 in 1876.

Some of these burial societies are got up chiefly for the gain of the collectors and other officials, whose salaries and commissions absorb fully one half of the total income. The pay being dependant upon the number of members entered, the agents are often not very careful as to the persons admitted, nor to the circumstances connected with the death of the insured. The more money paid to the parents, commends the society more to their friends and neighbours as an inducement to go and do likewise.

Baby farming.

This has lately come into prominence as an additional cause of infant mortality, and although the evil may not be so great here as in London where infants are deliberately helped into a better world; still there can be little doubt that something of the same kind occurs amongst ourselves.

There are advertisements appearing from time to time in the newspapers in which parties offer to adopt children for a certain consideration which once paid, the parents are freed from further obligations to their offspring. We all know the difficulty of rearing infants deprived of a mother's care, and of the great mortality of Foundling hospitals; and beside this danger there is a strong temptation for unscrupulous persons to getting rid of the adopted encumbrance. I was lately requested to procure a baby for such adoption with a good sum attached to its care, but from ^{the} little I knew about the applicants, there would have

been a gain from the transaction

Out nursing

In the case of mothers, whose necessities compel them to work away from their homes for subsistence, and to leave their young children to the care of a neighbour, or to some inferior old woman, the chances of the survival of the infant are thereby greatly lessened. These nurses to save themselves trouble give these infants in many cases whiskey, laudanum or other opiates in order to make them sleep, and indeed frequently cause them to sleep that sleep which knows no waking.

Illegitimate children

In the case of unmarried mothers who for the most part have to toil for their daily bread, the child is felt not only a burden upon her scanty means, but also a reproach upon her character, and there is the strongest temptation for quietly getting rid of the object, remembrance of past folly

In addition to the risk to the child of deprivation of the mother's care and milk as just mentioned there is the danger of the friends or nurse being as careless as possible of the wants or ailments of the child if not guilty of further cruelty. The very desire for its death tends to culpable neglect if not worse. Thus the percentage of deaths certified and uncertified ~~of such unfortunate infants~~ is nearly double that of legitimate children; so that there is the fair suspicion that death is hastened in many of these cases although detection of actual crime be very difficult if not impossible.

Early Baptism

The custom of our Roman Catholic inhabitants of taking their infants when only a few days old to the chapel for the rite of baptism seems to me to be fraught with danger. I have known infants taken the day after birth if supposed to be in weak health, some little

distance to their nearest place of worship even in winter weather. The religious motive may be a good one according to the teaching of their faith, but looking at the fact of the exposure of a feeble babe to inclement weather it seems medically to be far from prudent.

A similar practice in France of requiring young infants to be brought to the *mairie* for registration had to be abandoned from the increase of mortality, and I fear this custom in a colder climate must be attended by bad results, that it will not promote their welfare here, whatever it may do hereafter.

Drunkenness

Next to Overcrowding the habitual use of Intoxicating liquors, seems to me a main cause of mortality, as not only in itself one of the chief sources of poverty, disease and death, but it farther induces and intensifies all other evils. It is not the place in this thesis to enter into the controversy as to what extent Alcohol is useful or detrimental in health or sickness, but this great curse of its habitual and excessive use is so manifest, that it is impossible to ignore it in our researches as to the causes of increased mortality in this city.

This great evil of drunkenness is unfortunately the striking characteristic of our country, and to a marked extent the besetting infirmity of the working classes. Those who have travelled upon the continent must be struck by the wide contrast in this respect, of the habits and appearance of the lower classes of Britain, compared with those of a

similar grade in other parts of Europe. This evil of squandering so much money upon a questionable indulgence by those who can ill afford it, is becoming every year greater in spite of all efforts legislative and philanthropic to check it. This is attested both by the increase of the committals for drunkenness and by the increase of the revenue returns to the Exchequer now constituting one third of the entire income of the State.

It is calculated by Mr Hoyle that upwards of One Hundred and fifty millions of pounds, were expended ~~last year~~ ^{by the people of this country} on those dangerous beverages which medical science has declared to be useless in health, and of limited efficacy in disease. This sum represents £5 per head for every inhabitant of the kingdom, or about ten shillings a week for every family in Great Britain. The share of Glasgow, at this rate would be about Three millions, an enormous sum to spent by its citizens,

the majority of whom, can so ill afford it. It has also been estimated that whilst there is a butcher and baker for every thousand persons, there is a dram shop for every one hundred and fifty. We find these public houses congregated in the greatest numbers in the most poverty stricken districts of our city, as if by a strange anomaly that those spend most on this luxury who can least afford it, the poorer the persons, the more whiskey they drink.

The aspect of our streets on a Saturday night, the confessions of the inmates of our hospitals, the experience of city missionaries, the practice of medical men in our poorer localities all tell of the injury done to the health and families of our intemperate workmen. I need to have a vague idea of the intemperance and poverty of the masses, but, during the past two years, having seen personally during my medical mission work the wide spread results of this evil I feel strongly as to ^{the} abject poverty, immorality, ill usage disease and death

thereby produced.

It matters not how large may be the wages of the labourer or mechanic, if once he has acquired a liking for strong drink, he will spend the greater part of his wages in this selfish indulgence, compelling his family to live in a wretched dwelling, beat, ill use and starve his wife and children, and thus impair the health and shorten the life of himself and family.

This evil habit so embroiles the man that his personal welfare, the claims of his family and the restraints of religion are all disregarded in his craving for the intoxicating cup.

Even the very paupers spend a large share of the pittance they receive from public charity upon that whiskey which has reduced most of them to their present degraded position.

As to the extent this intemperance affects the public health, and adds to the amount of preventable disease and death, it is perhaps impossible to arrive at an accurate estimate,

since it is always associated with other evils, but there can be no doubt of its great deleterious influence.

With regard to the effects of strong drink on the constitution I may be allowed to quote the opinions of two of the most eminent physicians of the present day.

Sir Henry Thomson says "I have long had the conviction that there is no greater cause of evil moral and physical in this country than the use of alcoholic beverages. I have no hesitation of attributing a very large proportion of the most painful and dangerous maladies which come under my notice, as well as those which every medical man has to treat, to the ordinary and daily use of fermented drink, taken in quantity which is conventionally deemed moderate."

Dr. B. W. Richardson tells us "that Alcohol is a narcotic poison and is in no sense a food. It reduces the animal heat and force, over taxes the heart, paralyzes the brain and nerve centres generally, destroys the vital organs and induces many bodily and mental

diseases. It lessens the happiness and usefulness, and shortens the life of every generation which indulges in its use.

All medical men are fully conversant of the numerous forms of disease brought on by the free use of alcohol, and will I think readily concur in the opinion often expressed that fully one half of the cases occurring in hospital, dispensary and private practice have their origin directly or indirectly from strong drink. As to some of the special forms of disease arising from indulgence we may specify a few.

Persons accustomed to this substance, find it, what seems to them, a daily necessity, and cannot take their food or perform their daily work in comfort without this stimulus which gives them temporary relief. This continued use causes dyspeptic symptoms, a loaded stomach, excessive thirst, a bloated skin and physical debility. Afterwards we find disease of the heart and degeneration of the blood vessels, structural disease of the liver and kidneys,

disorganization of the brain and nerve centres producing epilepsy, paralysis, dipsomania, delirium tremens and a premature death.

Abundant examples of these and other lesions must be perfectly familiar to all practitioners, especially such as are engaged in hospital or dispensary practice, so that there is no need of farther illustrations from my own limited experience.

The moral consequences of this vice are even worse than the physical. Alcohol debilitates the reason, stifles the conscience, and gives supremacy to the lower and animal propensities of the man, so that persons under its influence commit daily those wrongs and crimes often upon their own families which appear at every police court, and which are a disgrace to this christian country.

Our municipal and parliamentary statistics show that fully two thirds of all the crime, three fourths of all the pauperism and a corresponding proportion of ignorance and irreligion

are the necessary results of drunkenness.

But the drunken parent not only suffers in his own person the bad effects of indulgence, but his children are born into the world weakened alike in body and in mind so that they are less able to resist temptation and fall victims more readily than others to evil influences.

The discomforts connected with overcrowding mentioned in the earlier part of this paper no doubt contribute largely to form the habit of drinking. Besides the bad atmosphere which so many of the poor breathe, the hard labour by which numbers earn their living produces a prostration which stimulants seem for a time to remove. The home generally small and overcrowded, with a wife often dirty and clatter and children noisy often drives the husband, lodger or elder sons to seek for recreation in the attractions and companionships of the public house.

The great want of open spaces in Glasgow where persons might resort in the summer evenings (the few which exist being usually at some distance from the centres of population) and the lack of public reading rooms or libraries where men could spend a leisure hour in the winter nights, leaves no resort but the street corner for a gossip with their neighbours or to betake themselves to the questionable attractions of the music hall or public house.

The habit of frequenting such places and of constantly partaking of what are called refreshments has become familiar to our working classes from their earliest years and is connected with every occasion of enjoyment or festivity. This has led them to associate ~~every~~^{all} occasions of merrymaking with strong drink so that upon every time of recreation the whisky bottle is regarded as the main thing needful. When therefore on a Saturday afternoon the Fair season or other public holidays

they may find their way to an inland village or to the seaside resort, the main gratification of the masses is the quantity of liquor which they can imbibe, and constitute themselves an annoyance and even a danger to their sober neighbours. I have myself been in more personal danger from such riotous people since my return home, than during a sojourn abroad for many years, and the sights and sounds of a drunken rabble at a railway station or the deck of an excursion steamer are worse than can be witnessed in so called pagan lands.

The women also are tempted to seek refuge from their home cares and troubles in that which to the other sex seems to be a panacea for all their ills-of-life. They naturally argue what is good for the husband cannot be bad for the wife. It is very common within my own knowledge for a club of matrons to assemble in the afternoon at one of their homes

and discuss the merits or demerits of their neighbours over a bottle of beer or a gill of whiskey, got from the family grocer but which figures as goods in the pass book. I need not state that the habit of drinking amongst women has become much more prevalent during late years, and that when once a woman has fallen victim to this vice her reclamation is much more difficult than that of the stronger sex.

The records of the Police Courts and the experience of those who come more closely in contact with the poor in seeking to relieve their bodily and spiritual wants are most conclusive on this point.

The influence of the mother tells more upon her children than that of the father and her intemperance renders the home still more wretched and the life of the little ones still more miserable than even the drunkenness of the father.

This love of strong drink on the part of either parent strips the home of the most needed articles of furniture, takes from themselves and children

the ordinary attire required by comfort, deprives them of even necessary food so that the insufficiency of food, clothing and habitation tells upon the health especially of the younger and feebler and thus becomes a most fruitful cause of disease and death.

Though drunkenness thus lays the home desolate and clothes its inmates with rags, still in all their wretchedness they still resort the more to the cause of their ruin. If they are cold, the glass confers a temporary warmth; if they are hungry it supplies the place of food; if they are miserable there is forgetfulness in the bowl; if they are sad there is temporary exhilaration in the gill stoup; thus they drink to forget their poverty and to remember their misery no more.

Amongst other causes contributing to this sad state of things amongst our working classes may be mentioned the practice of paying labourers in public houses by their fireman as a matter of convenience, ^{for change}. In the ship yards on

the Clyde where piece work is common the squad of men engaged upon a job will also resort to a similar place for the purpose of ascertaining and dividing each man's share. Every one is expected to drink something for the good of the house and thus dissipated habits are readily formed.

The public houses are also planted as closely as possible to these works, and men often leave as much as a third and even more of their wages for drink supplied upon credit during the preceding week or fortnight. I believe that I am quite within the mark in stating that one out of every three or four shillings of the wages of our skilled artisans goes in payments for that which satisfies them not.

One man when remonstrated with about his conduct is thus squandering his earnings to the detriment of his family said "It is all very well to talk when I am here at home, but what am I to do upon the pay night. If I am not neighbour like and drinks

with my mates on Saturday I will have the life of a dog with them for the rest of the week.

It is a sad sight every Saturday to witness in the poorer districts of Glasgow the crowds of tipsy men cursing swearing wrangling and fighting with each other like so many wild beasts; & to see wives trying to guide half drunken husbands past the temptation of the numerous dram shops safe to their own homes so as to secure some little for the necessities of the household. It is still more sad to follow these people to their wretched homes and witness the want and privation of the family, and to hear the sad tale of illusage, starvation, blows and worse from men brutalized by drink, inflicted upon poor wives and helpless children.

As medical missionary during the past two years I have seen very much of this terrible curse of intemperance, and of its woeful effects upon health and strength, of comfort and of life, of numbers

in this community. It would be easy for me to give instances of such cases, did the space of this thesis permit; but it is only those who are brought face to face with the suffering poor can form any conception as to the extent of this drunk curse, and the poverty wretchedness disease and death thereby occasioned. God grant that the time may not be far distant, when righteousness and not drunkenness will flow down our streets like a river, when the medical profession, the church and the state will use their combined efforts to stem this mighty torrent of intemperance which engulphs so much of ^{the} health happiness and prosperity of our country.

Tobacco

Tobacco smoking a very common custom with ~~the~~ all classes also adds its share to the deterioration of the health and predisposition towards disease.

Although tobacco be itself a poison and upon its first use powerfully affecting the nervous system, still that system soon acquires a tolerance of it, and the odours being speedily eliminated by the lungs skin and kidneys, a moderate indulgence in it may exist without marked deterioration to the health. The custom of smoking however if carried to excess, or practiced upon an empty stomach in the early part of the day, or in the case of young lads may give rise to serious symptoms. The nicotine may affect the muscular fibres of the stomach, leading to grave impairment of its functions, and thus induces frequently severe indigestion, of which I have known severe cases both in this country and also in Australia.

Its free use also lessens the activity both of the body and of

the brain, the nerves may ^{in time} also become affected as shown by impairment of vision; ringing in the ears &c. The degeneration of the present race of Turks is due in large measure to their immoderate use of this narcotic. The heart also becomes debilitated and irregular in its action and in a recent case seen by me the patient had acute pains resembling angina pectoris produced by excessive smoking, which pain was removed by giving up this indulgence.

With young lads of whom we now see so many strutting along the streets with pipes in their mouths, this habit must intensify the symptoms above described and probably has a deteriorating influence upon their growth and height. It is said that the French government have prohibited smoking in the military schools from the number of conscripts rejected upon examination for physical defects especially low stature, which were attributed in large measure to the too early use of the Indian weed.

The over action of the glands of the mouth produced in smoking, leading to frequent expectoration and consequent loss of saliva tends to impair the digestion, and also causes a constant thirst which often developes into the too frequent use of alcoholic beverages and may lead into intemperate habits.

Amongst the poorer, class the money spent upon this expensive luxury must also often be all spared from their limited wages. Smoking and drinking are generally associated, and it is this combination which is so hurtful to their purses and persons, and restricts the food and comfort of those dependant upon such persons for support.

Tea.

Next to the harm done to the men by strong drink, I would place the excessive use of tea on the part of the women. It has unfortunately become the habit with the majority of the wives of the

working classes, through laziness or want of thrift to neglect the good old Scottish dishes of porridge, broth &c and substitute tea and bread at every meal, adding where possible what they call kitchen—that is meats fish eggs or the like.

This frequent use of tea in the case of men living much out of doors and having plenty of animal food may not be attended with bad consequences. In Australia where I resided more than twelve years this use of tea is very frequent and I was not aware of much injury to the health from this custom.

But in the case of women of sedentary habits, living in confined rooms ~~living~~ ^{subsisting} almost exclusively upon bread and tea (taken in large quantities, well boiled and with little milk or sugar) much harm decidedly results.

This monotonous and imperfect diet continued for a length of time produces severe headaches, constipation of the bowels, great flatulence, feebleness of muscular power, low

spirits and a nervous semi hysterical condition with marked irregularity of the heart's action.

This faulty and deficient diet, must also tell much upon growing children and along with other bad sanitary conditions, tend to produce rickets, disease of the bone, scrofulous enlargement of the glands, feeble muscles and general want of stamina which unfits them to withstand the noxious influences which surround them.

The class however who are most directly injured by these strong acting potent infusions are the young women who are employed in great numbers in our mills and factories. Most of them from their distance from the place of work are unable to have their breakfast or dinner at home and carry their food with them. These meals are usually taken in a room set apart for the purpose in the mill and consist almost exclusively of steamed tea bread and butter. The same fare usually forms their diet at

their own houses. The general health becomes impaired from this insufficient food in the manner already described, so that ^{by this habit} in addition to their spending many hours daily in a heated atmosphere, with exposure to cold and wet in the early mornings of winter and spring often with inadequate clothing, they are predisposed to diseases of the lungs especially Phthisis. Large numbers of these women annually fall victims to this fell scourge of our country to which their whole mode of life renders them specially liable.

These poor girls often present themselves at our dispensaries (hospitals and private) and either from their straitened circumstances preventing their removal to healthier resorts, or from the advanced state of the disease little hope can be held out of cure.

All that can be done in most cases is simply to soothe their passage to the tomb. A little consideration on the part of the employers of such persons, and greater conveniences of cooking and eating, might do much to mitigate this source of ill health.

Opium

I have also found the practice of opium eating to be not infrequent, and the regular use of this poison must certainly be prejudicial to health. Cases of this nature occasionally present themselves at the Infirmary, but are more frequently met outside, in private practice amongst the poorer classes.

Most of such persons were women in the middle or decline of life, who were led into this habit originally by having to use opium frequently to relieve pain or to induce sleep.

This habit once acquired is exceedingly difficult to break off and I have not been very successful in the few cases I have encountered.

In one instance of a woman of forty five years who could not sleep without this drug I gave a sedative mixture of Bromide of Potassium and hydrate of Chloral to use instead at bed time.

The same night I was awakened at 2 A. M. to see this woman, who unable to sleep had in three hours ~~consumed~~ swallowed the entire contents

of this eight ounce bottle, and had roused the other inmates of the house by her means. I administered an emetic and this with other remedial measures soon brought her out of danger but gave me a caution to be exceedingly careful with like cases.

Another person told me that she had been fifteen years in this habit and that her usual allowance was one ounce of solution of morphia daily, although sometime she exceeded this quantity. A medical man some few years ago had endeavoured to reclaim her, had put her under treatment and had also given her money for her support during his experiments but in vain. He found her appetite to fail, loss of sleep and flesh to ensue with other bad symptoms so that she was at last dismissed and told to resume the drug but to endeavour to reduce the quantity.

This practice though it may be continued for many years brings with it evil consequences. When the grateful effects of the medicine have passed away

there follows great mental depression, a strong feeling of weakness, a great disgust for food and a morbid craving for the drug which nothing else will satisfy. They feel very miserable and utterly unfit for the day's duties until they have their accustomed dose. Ultimately life is shortened by failure of the digestion and by impairment of the nervous power leading to paralysis &c

In a recent instance of an old woman who had taken an ounce of laudanum and often more for a lengthened period she was attacked with spasms like those of tetanus but from which she has at present recovered.

Another and a more innocent use of this medicine I have found to be to quiet drunken husbands, who if inclined to be extra troublesome on a pay night get a sleeping draught put into their favourite liquor so that they may more speedily pass into that oblivious state in which less danger may happen to themselves and others.

Foul Water

I have spoken at some length of the evils attendant upon foul air, but foul water is also a frequent cause of disease as well as the gases &c which may proceed from matters contained in it.

Glasgow is very fortunate in its water supply, the water of Loch Katrine being almost unequalled for purity, still there are diseases common in this city which are closely connected with contaminated fluid.

One source of disease is from the bad habit in many houses of having an open cistern placed in the water closet immediately above the basin, from which cistern the supply of water for drinking and cooking is directly taken.

These open reservoirs are thus receptacles for absorbing all the noxious vapours which may find their way into the house from the sewers and soil pipes. Dirt or dust also find their way into

such places and sometimes mice or rats, whose decomposing remains are neither healthful nor agreeable.

Dr. Ferguson in an article upon the water closet system of Glasgow has shown that the lead pipes leading from the closet to the main descending soil pipe often become perforated and thus constitute a source of ill health. He endeavours to prove from statistics that the diseases attributable to breathing the results of the decomposition of excreta such as typhoid fever, diphtheria, scarletina, diarrhoea, and the like, have increased in late years from this cause. He ascribes these perforations to the absorption of the sewer air by the pure water on the sewer side of the trap and ^{its} discharged from the house end of it within the dwelling.

On this account he deems the present system though very convenient to be also dangerous to health.

Typhoid fever which proved fatal to over two hundred persons in Glasgow last year is a disease which results from water, or air, ^{from water} impregnated with decomposing excreta of persons already suffering from this complaint.

Since our water supply in pipes is undoubtedly pure, except in cases caused by impure milk, the only other source of this disease must be impure air from trap drains privies or middens.

A serious outbreak of this disease occurred at Crosshill one of ~~the~~ our healthiest suburbs, which was traceable to contaminated water from a farm getting into the milk in the first instance, and subsequently propagated by impure air from defective drains.

In Govan we had a similar epidemic upon a smaller scale and in which the drainage was also at fault although its origin was not so clearly ascertained.

This disease under proper sanitary arrangements should be almost unknown amongst us.

Loose Skins

I have great faith in the maxim "cleanliness is next to godliness" in spite of the monks of the Middle Ages who died in the odour of sanctity, but who must have emitted odours of another kind from the state of their body clothing as related by their contemporaries.

It seems to be a social law that the poorer a persons becomes, the dirtier are their bodies clothing and habitations. The savage in his native wilds, if destitute of other dress gives himself a coat of paint, or smears grease and coloured clays over his body as some protection from cold.

I suppose upon the same principle that a dirty skin will enable its owner to stand cold ^{better}, and ~~will~~ ^{to all} necessitate less food than his cleaner brother. Whatever be the reason, instinct or laziness, dirt and attendant vermin are unfortunately the characteristics of our poorer neighbours. It is this which renders visitation and mission work so unpleasant and renders a change

of garments necessary on returning home. This uncleanness also extends to the house itself so that with windows rarely opened for ventilation the ill smells render health almost impossible.

Even with the better class of artisans personal cleanliness is very much neglected and daily or even weekly ablutions quite unheard of.

A patient in the Western Infirmary who was ordered a much needed bath preparatory to occupying his bed in the ward protested vigorously against this as highly absurd and unnecessary. Such a novelty, ^{he asserted} would make him worse and should he recover he would be a standing joke to the rest of his fellow-workmen.

This man was but a sample of his class who form part of the great unwashed. The uncomfortable feeling caused by the want of a clean skin together with breathing the same air all night in a crowded room, no doubt leads many to partake of a morning dram

and to the formation of the dangerous habit of drinking.

Evil Life

There is a large class of diseases called venereal the result of impurity of life which forms a ~~large~~ great part of preventable disease in all ranks of life. The experience of all medical men is conclusive as to the number of cases constantly presenting themselves of this character.

The effects of these diseases are not confined to the time when such were first incurred, nor to the individual himself, but may extend throughout the entire life time, and affect the constitution of his wife and children.

The extent of these diseases is shown by the special legislation for the protection of our soldiers and sailors against the consequences of their vicious indulgences; in the hand bills thrust into the hands of every street passenger, in the vile advertisements which disfigure so

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many of our newspapers, and in the number of prostitutes who infect our streets.

In writing this essay to be reviewed by older and able physicians than myself I need not further allude to this unsavoury subject or mention the numerous secondary and tertiary symptoms of syphilis manifested by patients in almost every ward of our Dispensaries, as well as the numerous cases connected with the abuse of the sexual organs which occur in private practice.

The worst results of criminal indulgence are those experienced by innocent wives, and helpless infants ~~with~~ ^{whose} ~~organism~~ ^{organisms} diseased often prior to birth or which sooner or later manifest themselves in premature death or life long impairment of health. It is most true "that a man's sins will find him out" and that men's present vices often become their worst plagues.

Ignorance

The wise man says "That the soul be without knowledge it is not good" and the later maxim "Knowledge is power" are true physically as well as morally. Without the elements of knowledge a man is for ever condemned to poverty, to a vacant mind and to sensual enjoyments which expose him to influences which weaken his health and shorten his life. An ignorant non-reading and therefore non-reflecting population are incapable of being influenced by high moral considerations, and remain to a large degree like children or savage creatures of impulse and not of reason. Low indulgences, cruel treatment of each other and their children, fighting drinking and other vicious practices are always found to prevail amongst the uneducated. Their spare time is a burden to them since their minds are almost a blank, they are generally envious at the prosperity of those in better circumstances and need the strong hand of the law

to keep them in order. Such persons furnish our police with abundant occupation especially on the Saturday evenings and swell the lists of drunk and disorderlies in our criminal courts. Their poverty and drunkenness exposes them to the evils of overcrowding and all its attendant bad consequences on health and life already detailed in the earlier part of this paper.

Irreligion

The writer cannot conclude this paper without referring to the advantages even in a medical point of view of a life based upon the precepts of our Christianity, and of the evils of a life with no higher motive than self indulgence. If the body be strongly affected by the mind, if contentment patience and hope tend to preserve the health and assist recovery in disease then this subject should not be altogether ignored in the present treatise.

It is then an appalling fact that thousands of our working classes in this city have withdrawn themselves from the influences and restraints of our holy faith and have sunk into practical heathenism and barbarism. Their church is the public house, their prayer meeting the street corner, their bible the police news or low song book, their life that of mere impulse and animal passion. Living generally in over crowded neighbourhoods, their poverty aggravated by intemperate habits, their homes rendered more wretched by dirt bad air insufficient food and violence of tongue and hand, they and their families are thereby impaired in health, and yield more readily to disease and death.

Nothing but personal christian influence, and the motives which religion alone can supply, will ever avail to elevate these lapsed masses to a higher level of comfort and of character. Outward measures of sanitary police enforced by law

may do some good, but these regulations will be systematically evaded or neglected unless the people themselves feel their advantage and give them their willing cooperation. Acts of Parliament alone will not make a people virtuous, unless their own moral sense be enlightened, and they act from reason and not from mere force. The influence of the

Christian missionary has always been found to be of more power than the baton of the policeman whether among the savages at home or abroad.

The state may do its part but it must be supplemented by the church, and until our Christian people set themselves to more active personal endeavour to reclaim their erring brothers and sisters, the same sad tale of preventable disease and disease and death will ever remain to be told by successive narrators and Glasgow will cease to flourish if its citizens neglect the preaching of the Word.

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Insufficient Medical Aid.

Another cause of the increased mortality of Glasgow is the scanty provision made for the sick poor in comparison with other ~~other~~ places, as shown by the high rate of uncertified deaths, 20 per cent of the whole.

The great fact is well known to all of us that though low wages, intemperance, desertion or death of bread-winners, continued ill health, chronic diseases &c a large proportion of our population live upon the border line of pauperism, and though managing to struggle along in health are unfit to meet the extra expenses of sickness.

Take the very common case of a labourer with low wages and a large family who takes ill with rheumatic fever, chest affection or a like serious disease. After trying various domestic remedies suggested by ignorant neighbours, a doctor is at length sent for and an attempt made to pay for his services and medicines. The lowest ^{usual} fee for the poor is one shilling

and sixpence for a visit and the same sum for a bottle of medicine. Two visits weekly and two bottles of medicine amount to six shillings, which certainly is more than such persons can possibly pay. When payment fails the doctor frequently ceases to attend and the poor sufferer is left to himself, if he recover by a long convalescence, if he die to swell the number of preventable deaths.

I have met many such cases in medical mission work, and a little timely aid has been the means of restoring such patients to health, who otherwise would probably have died and left their family a burden to the parish.

Our infirmaries can only hold a small proportion of such cases, even were admission fees always procurable, and the numbers dismissed as "improved" or "in statu quo" need some attention at their own homes.

Such societies as the Medical Mission, Association for relief of incurables, Out door nursing and

Convalescent Homes have made some provision for meeting such cases but it is very apparent that such provision is inadequate, and that something more is absolutely necessary in order efficiently to overtake this wide field of suffering.

Dr Russell the health officer of the City whose authority will be admitted as most credible on this subject, did last year publish a pamphlet on the Uncertified Deaths in Glasgow in which he shows conclusively our great neglect of our sick poor in comparison with other great towns. Without quoting his figures in detail, during the three years 1872-3-4 there were 45,556 deaths registered of which 10,187 or 22.3 per cent were not certified. The average death rate was $29\frac{1}{2}$. Distinguishing between persons below 5 years and those above that age the average of the three years shows 31 per cent uncertified below 5 and 15 per cent uncertified at 5 years and upwards.

The average number each year for those quoted is 3,400 uncertified deaths, and if the statistics be correct which state that there are thirty cases of serious sickness for every death then it would appear that there are upwards of a hundred thousand cases of illness, ^{annually} amongst the sick poor which receive no attention from this Christian community. Charity begins at home and it might be better for our wealthier citizens instead of sending aid for the sick and wounded of foreign wars in Germany or in Turkey, to give more liberally to aid their suffering brothers and sisters at their own doors.

In 1845 some improvement took place and the numbers were reduced to 3025 uncertified and the percentage lessened to 20.

In 1846 the improvement was still more marked, the uncertified deaths being only 2038 and the percentage only 15.

One reason of this better state of things was the regulation enforcing a medical certificate before receiving burial money in the amended Friendly Societies Act, which affected fully one third of the registered deaths, 4900 out of the total of 13,400 for the year.

Another reason was the arousing of the mind of the public to some sense of their remissness by the facts and statements adduced in Dr Russell's report, and the extension of medical aid by the various parishes to those not actually in receipt of parochial help on the poor roll.

This aid has however been discontinued since the Board of Supervision have ruled that none but registered paupers can legally receive such assistance from the public funds. This somewhat harsh enactment therefore renders it necessary, that needed medical aid should be given in some other form.

contrasted with other large towns Glasgow stands at great disadvantage.

In 1874 according to information collected by our worthy Health Officer with much pains, in this city 22 per cent of the total deaths were uncertified;

in Edinburgh only 6 per cent,
in Liverpool only $4\frac{1}{2}$ per cent,
and in London not more than 2 per cent.

There is therefore no other city in the Kingdom where reform in this direction is more urgently required, or where the wants of the sick poor receive so little attention as our own city.

The following table will show the points of contrast more minutely.

Rate per thousand.	Glasgow	Edinburgh	Liverpool
Treated at home	3. per cent	44 per cent	40 per cent
- at Dispensaries	56 -	131 -	182 -
- in Hospital	13 -	25 -	14 -
Total	72 -	200 -	236 -
Confinements	47 -	188 -	87 -
Populations	525 thousands	212 thousands	510 thousands

In Liverpool besides the hospitals there is a very complete arrangement of free Dispensaries with nine resident medical officers in addition to the consulting staff and other officials. The sick poor are attended at their own homes, as well as at the dispensaries, and medicine is supplied in all cases.

In Edinburgh besides four hospitals, there are five general dispensaries, all of whom furnish medicine and all provide for the visitation of the sick at their own homes when unable to attend in person.

In Glasgow we have three hospitals, and the only free general dispensary represented is the Medical Mission which alone provides medicine and home visitation for the sick poor of the whole city with a very limited staff.

Putting all these facts together we must admit our own great shortcomings in medical relief.

and the immediate need of vigorous action to surmount our acknowledged deficiencies. It is matter of surprise that after all the facts and figures adduced by Dr Russell that our philanthropic public spirited and leading citizens appear to treat this most important subject in which the lives of hundreds are at stake with so much indifference. Some little stir was made when his views were first published, but no definite action has been taken to meet the claimant wants of the sick poor, except the extended medical aid of the parochial authorities which has now been discontinued. A committee of the Charitable Organization Association ^{was appointed} to investigate the matter fully, and devise means for affording relief but hitherto they have done nothing. Some little clamor has been lately raised in some of the English towns about the abuse of Medical charities and an influential section of this committee seem afraid to recommend free

dispensaries, and prefer Provident Societies.

I am not aware of any Scottish town in which such medical clubs are found to thrive, and any efforts made to establish them here have generally proved failures, unless where authority is given to deduct a certain sum from the weekly wages of the employees in large public works. It ^{was} endeavoured to start an association of this kind last year in Govan, and although six thousand circulars were sent out offering to provide attendance and medicine for three pence per week for ~~the~~ ^{an} entire family of the poorer classes, only six applications were received in reply.

The institution of dispensaries where medicine is given as well as advice to suitable applicants, with some provision for home visitation either by advanced students or by young medical practitioners seems to me the only means of adequately meeting the necessities of the sick poor.

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The dispensaries attached to our two large general hospitals accomplish much good, but except in very rare cases they do not supply medicine. I have been told by several patients that the prescriptions given them have been of no advantage since the charges made by the druggist of two or three shillings per bottle was more than their limited means could afford. A uniform charge of one shilling, such as is made in one of the London hospital Dispensaries, would be a great boon to the poor and yet be sufficient to meet all expenses of the medicine.

The dispensaries for special diseases such as the eye, ear & skin &c give medicines free in some cases and in others either make a fixed charge or expect the patient to put an offering into the contribution box.

The only public Dispensaries in Glasgow for general diseases are those as already mentioned in connection with the Medical Mission which has been a great blessing

to many a poor patient. The conditions of obtaining relief are professed inability to pay for a Doctor, and attendance upon a short preliminary religious service. The first and until 1876 the only dispensary was opened in 1867, the second was opened last year in the south side of the river. The number of persons treated has gradually increased from 8,000 to 40,000 and the staff from the partial attendance of one physician to the full services of three.

I used to give what assistance lay in my power to this society both whilst a student, and after obtaining my degree, and there became practically acquainted with that great medical destitution which Dr Russell has so well laid before the public.

After receiving my qualification from your university two-years ago not being overburdened with work I sought both to gain experience and also to do some good to my poorer fellow-citizens by starting

two small mission dispensaries at my own charges, and on my own plans. One of these was situated in North Street Anderson and the other in Maitland Street Cowdall both populous and poor localities.

In order to restrict the numbers so as better to watch the results of treatment, as well to discover the deserving poor I gave cards for distribution to the various missionaries in the districts. Any persons without these cards had their circumstances inquired into, and, ^{while relieved} recommended before return to seek the usual card of recommendation. Free advice and medicine were given to all suitable cases and also home visits paid where necessary. All applicants had also to attend a short introductory religious service.

The result of this experiment was so far satisfactory that about 3000 cases (including visits and repeats) received aid from me during the winter of 1845-6. On my removal to Goom about a year ago,

on account of the distance and my other engagements I was compelled to give up the Cowcaddens work five months ~~ago~~ since, but still continue the Anderson dispensary though at some personal inconvenience, and diminished efficiency through the requirements of private practice.

I have learned sufficient during this experience of two years, to convince my mind of the urgent needs in sickness of a very large section of our community who cannot possibly pay the usual medical charges, and I deeply regret that in my native town neither the State as in Ireland, nor private benevolence as in England extends that charity, which is less liable to abuse than any other.

What any private individual can do in this direction must be partial and temporary, and the work will only be efficiently performed by a properly organized associations like those of Edinburgh or Liverpool.

I earnestly trust that older, abler and better known medical men than myself will use their best efforts to devise such means as will best relieve that great amount of preventable suffering and death which at present calls loudly for help.

We have surely as kind hearts and open purses in Glasgow as in other towns, and I am certain were public attention fully drawn to the requirements of the sick poor, that their call for help would not fall on deaf ears.

This lack of medical aid seems to me, to be one of the greatest defects of our city charities and I hope that this want will ere long be supplied, and that suffering humanity will not have longer to complain.

"I was sick and ye visited me not."

In reviewing the preceding pages of this Thesis I am sensible of many deficiencies and feel almost presumptuous in dealing with a subject with which my Examiners must be better acquainted than myself, and one requiring much more experience to treat than that of two short years. I have to request them to bear in mind that this essay was written in the intervals of professional ^{engagements} during the past few weeks, and to crave their necessary indulgence. If I have spoken strongly on Intemperance and other points it is because I feel strongly the many cases of hardship I have been called upon to witness, and speak "that which I do know and testify that which I have seen."

Alex^r Murfint
MB & CM